ANT/TRA/05

V

Mawson

1961

D. S. TRAIL

CANBERRA, A.C.T.

MAWSON,

V.B. IV

15th September 1961.

Travelled at last outside
camp. Left Hastings Police, Hayes,
Smith & Hall at 13 days, 2 days
& back by three days. All day
heavy snow, moderate to fresh
S.W. wind. Days feel 1 blanket
C. [illegible] 3 blankets
inside. Self with dog, Hall
Tent, Hastings very much
[illegible] down. T. up to
+ 24°F. Good radio contact self
and 2 Wellpacs.

16th September 1961.

Heavy snow & fresh wind
all day. Self stood in tent all
day. Smith & Hastings each day,
[illegible] C. Jennings, at 1600.
Snow. Knee deep round camp, very
soft. T at +18°F. Bad forecast
0430 tomorrow, hope to get
away for tomorrow.

17th [illegible], 1961.

V/p at 0630 but whiteout persistent & blizzard forecast for t-day at 0815. 0900, all 4 W. black family left for Corby depot & semi-whiteout, deep soft snow very tiring. Collected entire remnant of depot, 9 tins pemmican 1 tin egg powder, 1 tin oatmeal (4 gal) & K sacks. Killed 3 penguins off Corbe Corby & 1 at comp, difficult to catch in soft snow when they toboggan much faster than men can run. Snow falling, light ground drift & mod. S'ly wind, T +16°F, back in to tent at 1500 d remain. Scrambled eggs for lunch, penguin for dinner.

M. P. B. E. K.

M. W. H. P. E. G.

18th September 1961.

Depot at comp site

Ast 10 lb Oat flakes
10 lb Egg Powder
8 x 6 lb 7/16 mm Rope
A pick mitten on end of
1 mile South from Cape Styles Bluff
Cobb. At summit of the new
flat rise ~ 50' abv S.L.
Depot is under a low lip
overhanging flat black rock
3' high 30 yds NE (T)
of a 50' summit. No cairn

0630 rose to beautiful morning
cloudless, down breaking, as low
gold & green band under black
slate lit sky w thin aurora in west.
Away at 1030 after establishing depot
as noted above. Deep snow
somewhat annoying near slope but
temp 0° F. in open surface.
Track outside icebergs better,
fewer high & jumbled ridges.
Drove team most way across
w. intermittent leading & hot
pressure ridges, much easier in

good light, sun warm but light S. wind v. chilly.
1810 arrived at previous camp site North of Depot I. Dug fresh soft snow out of hole, up tent + in by 2100.
Beautiful evening but mod. to fresh sly wind, v. cold.

19th September, 1961.

500,000 map, pt a N.W. point of Skaude Island.

Gametiferous pyroxene gneiss interbanded w. gametiferous quartzite, str. 160°/vertical. The quartzite is a white to grey coarse-grained rock w. ~ 20% lavender-col. med. gr. gamets. The ~~gneiss~~ contains small pockets aplite + quartz separate w. biotite

SAMPLE 123 11518 11519

Seems to be a "gradation"
into Feldspar - pyroxene - SAMPLE
garnet gneiss one band 124
of pyroxene feldspar SAMPLE 125
with relict lenses of pyroxene
rock in a ? quartz - ? feldspar -
garnet matrix. It yellow-
brown colors. Biotite
is rare in this exposure.
Pyroxene bearing ? feldspar -
pegmatites cut the pyroxene
gneiss & quartz-rich SAMPLE
pegmatite. Very few 123
to abundant Mn Fe oxides.
The pyroxene garnet gneiss
is well foliated, fig. to
m.g. Yellowish black rock.
Dip very round Shanda's
west end 70° S wards, 60° S' wards
to South-west corner with
str. 120° & 50° S' wards.
To the section mainly green &
black feldspar pyroxene gneiss
w. brick red, fine-grained, concordant-
quartz-feldspar-biotite gneiss SAMPLE
11520 11521 126

Very well foliated bands → 10'
thick, also black quartz-sericite
biotite gneiss, med. gr. to
f gr. - biotite abundant loc.
M quartz rock ? pyroxene hornblende
loc has possible magnetite +
a/v. small quantity brassy
sulphide ? pyrite - no sample.

126

10' dolerite dyke, str. 70°, cut
quartz-gneiss + pyroxene gneiss
on S.W. corner shoals, runs
S.E. to 300' summit, straight + uniform
contact, no sample.

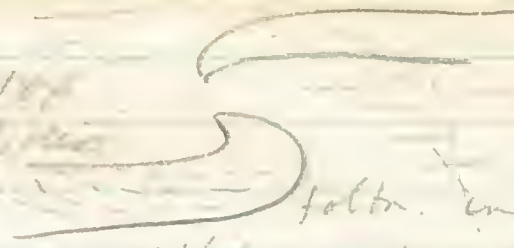
Island to N. of Shark I.,
less variety, pyroxene gneiss
(no garnet) red granite gneiss,
lt. brown-grey granite gneiss,
f.g., well foliated w. small biotite
veins, pseudo-schistosity, fractures
contorted, polished plastic beds.

SAMPLE 127

11523

11522

- folds.



St. No. I.

±20°, d. 20° to 30° S.W.

Island c, 1 m. S.W. b.

in cliff face, str. section
in cs gr. & med. gr.
yellow to brown quartz
rich grains, q.f. B.G & quartzite
well foliated to massive,
interbanded with black long
lens cs. gr. pyroxenite
& garnet-pyroxenite, garnet
abundant & cs. gr. thin section.
SAMPLE 128 11524

In the cliff section → 200'
a most striking type of
deformation, sliding &
bunching of slabs for layers
rocks, quartz, garnet bands

Gamet
Pyroxene

but more plastic rocks. Folding
c & b islands, rocks. Fold axes

blurge in dip.

c I., str 130° d. 20° S.W. ∞

Copper staining, ~~str~~ red-brown

Fe staining locally a.w.

quartz-garnet gneiss. Also

felspar-biotite & felspar-

hypersthene pegmatite; rare,

hæmatised - re-mobilisation??

- Acheron I. SW end joined to

the mainland by a glacier terrace.

Northern

Western end of Acheron I.

North coast - finely banded

lt. brown quartz gneiss, granite

gneiss, ~~str~~ 70% w. ~~30%~~

Hyp-pyroxene gneiss → 5' + 10' bands

+ 10% ingrain & concordant

yellow-brown biotite pegmatite

all str. 130° d. 20° - 30° W,

mainly 30°

A few pyroxene rocks as
discordant sheets :—

Schistose
qtz. grano &
hyp. gneiss

Intrusive
hyp. & Unconformable
hyp. gneiss

sills, but low
dip. gneiss, metamorphosed sediments
or dykes

North coast of island close to
East and Nelson N. coast.
Nth Coast quartzite & granitoid - granite
gneiss & granitoid hyp. gneiss
all m. g. & f. g. light yellow-
green pyroxene gneiss, also
large (30' thick) discordant ? dyke 11525
pyroxene rock, massive. SIMPLE 129.
Tectonics deformation by
semi-plastic w. fold axes
Str. N. Str, plunge ? gentle
Also folding in 2 directions
in plastic folds.

Photographs

DIARY - 19th September, 1961.

Rose 0815, slow breakfast
Cloudless sky, T - 2°F but
15kt E/ly wind. Away at 1230
when wind abated, Smith + Hoadley

W. end Shanda, then 2 days
towards Shark I., one lo s/sandstone
garnet-pyroxenite. Towards West
end Hebron, found Hebron joined
by glacier tongue to mainland
ice, cliffs on west side glacier
descended by snowdrift. Found
6 seal. W end Hebron at 1830
killed & butchered one, then
rapidly along N. coast Ideal
intru & dramatic recumbent folding,
+ dolerite intrusions, to sunset
then home by 2100.

20th September 1961.

On North coast Hebron
at West end, finely banded
& rapidly alternating lt
green garnet-pyroxene gneiss
greenish-black or rusty
fels for pyroxene gneiss,
+ lt brown + yellow quartz
garnet gneiss dykes
& sills 20/20/60

11

Foliation strikes at 160° ± .
E W rocks at dip 30° - 60°
but lithological boundaries
in detail are commonly steep (70°)
to vertical, + broad foliation
cuts lithology, strike all
same both.

Kvaos Promontory -

The North West end of the
promontory is separated by
a double-ended bowl, ice
glaciers from the rest of the ankaramite

The structure of the peninsula is apparently simple, Str. 140°/dip 20°-30° S.W, but in detail structure is complex. Lithological units, with boundaries are frequently vertical, N.E. and has an isoclinal fold, or serial, with vertical limbs, axis plunges towards 160° inclined 20°.

The rocks are almost all garnetiferous qz + ms. qz. pink, yellow, & lt. grey quartzite & granite gneiss, in parts + thick bands of graphite schists. There are dark SHALE known to block, mud & [30 11526 11527] to be a sandier small [illegible] and the material adjacent to talapoin. Fr stone, dark red brown, common in quartz-garnet rocks + weathered. Cu stain locally. Quartzite & quartz veins abundant, pyrites grains abt 10%.

1 63

Intrusive plastic, recumbent folds, abundant basement pronounced mineral elongation in dip direction. The pyroxene gneisses show segregation SAMPLE 131 11528
layers, "aplitic" material of probably consolidation of feldspar from hornblende rock, med. gr. cream colored, uniform unfoliated, white feldspar & lenses > 6" pyroxenite, garnet & hornblende in pyroxene gneiss ± [illegible] rock [illegible] layers, pyroxenite layers [illegible] garnet,

garnet only
1" x 3" lens.

The felsic lenses are [illegible] recumbent style, plunge in dip

In a pyroxene gneiss on Knob Pinnacle
a 30' thick, widely 5'-20'
has fistula felsic material which
look like vesicle fillings
Fistula are oriented with
long. Str. 170°, dip 70° West
& the rock at right way
up, for what it's worth.
At close to this is a 20' thick
sheet of pyroxene rock
cutting across the recumbent
foliation - the the finely
banded garnetite. Some
of the pyroxene gneiss
grades into the quartzite
& are probably tuffs, ashes,
(? greywacke) The thicker
ones have sharp boundaries
& are lava flows or minor
intrusives.

11529
SAMPLE
132

Beyond, is some fg garnet-
feldspar-pyroxene ~~rock~~ to minor
hornblende West dipping
hill. (70° to horizontal) 30' thick
& ~~interbedded~~ similar lithology to

1 of

At Dows Depot, east side Pennsylvania, of quartzite gravel, fossiliferous w. small amount

dk. mesial, ± q. white, very well foliated, quartz xls. well aligned in bands. Strike 133 ± NNE hinges fold for pyroxene 11530 gneiss all w. garnet, garnet-pyroxene. All str. 114°, vertical to 70° West dip superficially, detail is tight semi-isoclinal folding the style,

axes of pol. horizontal lineage on strike of foliation. Quartzite + quartz rock gneiss are dominant on Kron pink, yellow, & grey - the pink has more felspar.

21st Sept. 61:

Small island close E. of Depot I. & Depot I. East Eastern cliff, 70° high to isotic semi-plastic

TOP
South
North
Pivot?
Pivot?
Pivot 2
320°/10
Mark
Mark

Structure is so complex to be almost meaningless. All is semi-plastic folding of foliation & of disturbed pre-Cambrian Pinal schist & intrusive

Axial convergence of folds is 140°, approx. horizontal.

Nth coast of Alphad. Shows
Quartz rich gneiss, Q F B G.
gneiss, alt Q 50 F 20 B 10
G. 20, lt brown to dark brown,
rusty weathering mdg gr & cse gr.
Pegmatitic. Also concordant
20' dk. dk. greenish-black
hornblende-feldspar-pyroxene
gneiss w. pockets
& elongated concordant stringers
of pink quartz-pyroxene
material. Also gneiss is
mostly fine-grained
& massive appearing, qtz-
feldspar rocks be cse. gr.
All sh 150°/50°-70° W. SAMPLE 134
Also concordant FQBG pegmatite, 11532
Feldspar, Quartz + Biotite. Last
to be segregated in lens, feldspar
is light green color. Most

distributed thru rock.

Northeast corner of Skerila Is. block of (20) basalt red R11535
(gray to reddish - ? biotite ? trace
interbanded w/ reddish - brown
gneiss & qtzite & some garnet &
granite - pegmatite. The pegmatite
contains stringers of (5 mm x
20 cm) of black glassy
& red magnetite
locally abundant, 100' thickness
of fine banded, impure gneiss
quartz + pegmatite has
lion of common + SAMPLE 135 11531
pockets quartz. Cu stain
All strike about 120°, dip 30° S
to vertical. All cut and
shoulder, the lithology, strike
+ dip

EXAMPLE I

North coast is yellow brown
to orange (in white out)
med. gr. granite gneiss
or quartzite, poorly foliated to

well foliated, jointed
Finely interbedded (2" - 2') of
quartz rich f.g. & m.g.
mafic, black quartz-feldspar-
hornblende gneiss w. pockets
pegmatite, well foliated
all str. 160°/70-80° W.
Minor recumbent folds
throughout, dat 3' amplitude
axial plane 160°/10° W. Strike
channel Island Northeast of
Kamui. Finely banded &
well-foliated hornblende-quartz-
granite gneiss & quartzite
all med. gr. & fine gr.
with large boudins
(+ 3' → 10') pyroxenite w.
[illegible] rich with garnet
& locally common rel. ol
150°/70° W.

Great Lk biotite granite
gneiss 50% 5' plag
2" Lk banded, foliated
granulation, 1" pegmatite
gneiss w/ folding, fractured
(1" buff).

Alfred's East end is mainly
red-brown granite gneiss &
migmatite quartzite w. est 20%
interbanded pegmatite gneiss
& minor pegmatite sh 170° d.
30° - 60° W. Rare 3 or more
deformed sheets pegmatite
5' - 15' thick, cut foliation
dip 15° - 60°, varies direction
Minor resistant folds in
pegmatite gneiss plunge in dip
incl. 40°. Main range of
Alfred sh. 60° d. vertical - 70° W
hillslope in area.
Alfred & "island" ft rock at
east end are jointed by
glacier ice.

N. W. corner of Mapleton Q.
structurally complex, rocks affected
by local & vertical movements
folds, fully plastic grades
into semi-plastic / semi
brittle; axes plunge 10°
towards 320°. - Plate

Z 5 and d, 1½ m. W of W
Mapleton.

Foliation sub-horizontal
or dip 10° S. but A
fluxt-flow & overfold by
a gentle - broader open

Foliation is
cut by the
by the metamorphosed
basic hypabyssal
Dikes

That str. 146° d. 30° SW.
But the flowing is a SLIDE
to a.w. recumbent
folding axes approx horiz.
str. 140°

Pyroxenite

Granite
gneiss

Schist

is the the
"Scarfy Structure"?

DIKES

20th September, 1961.

Up 0730 Down 1015
Wet + Black Weather.

First to land at NE end
Acheron to Metagabbro folds, then
kill + cut up seal West end
Acheron 1230. 1500 Arrived
Kvos Promontory, geology to

1200, works, ~~moisture~~
decent houses, elaborate
simple structure in fact v. complex
w. ~~very~~ not pretty. Found
Dorsi depot as described at
Fort ~~and~~ Fromentin, food
mostly ~~fish~~ but permican
~~and~~ in very Few remains
collect seed en route home, O. Vaga
injured ~~both~~ reach camp at
1200, fel sleep ~~early~~ Dinner
Beautiful day, T 85° F.
Dinner 21st September, 61.

~~Breakfast~~ 0700, away at 1200 in
Zemmouri, T 0°F. Fort
like ? Depot I. quite fabulous
display Fields, Historic Shards
for Miles in whitewash, also
N. coast Shards, iron ore

Stage in pyroxene gneiss. V. cold
in light wind. E. wind
heads at Koon Hen Haugh
rough ice at East and Alfred
& con glaciers Inlet, Alfred
re. Inlet to North, some
crevasses. Photographs, beautiful
mountain peaks, sleds, on
Alfred & I. 1½ m. N.W.
Delayed by deep snow, home
1900 To seal skin.
Fine specimen of granite gneiss
Skuas shooted heartfully.

22nd September, 1961.

In the Rigel Skuas North &
North east of Depot I foliation
is sub-horizontal w. dips ⩾ 20°
in various directions, all quartz
heavy lt. brown granite with
gneiss, granite gneiss, & med.
quartz feldspar pyroxene
gneiss & pyroxenite.

Plastic bending or sliding
as noted above. (p. 24)
is very prominent in eastern
cliffs of island d.

Plan dip alt 40°, str 140°

The key West End North of the
West end of Pilsbry has
a prominent basic dyke,
several hundred feet wide
and ¼ mile, probably 50 feet
Dips are steep to vertical
mostly str. about 160° on
islands to S. rim; but detail
is very complicated, steep overturned
& recumbent folds;
Northeast corner S. rim
str 170°, d 80°W, recumbent

felds ± hyroxene green phase abt
hornblende ± strike

Bonp I. & neighborhood to hyroxene
green bands 50' - 100' thick,
that are themselves banded w/
- hyroxene green w. recumbent
isoclinal felsic metasom.
- Granit - feldspar - hyroxene
gneiss (30-50-20)
med. gr. feldspar-hyroxene
gneiss
Cm. gr. feldspar - hyroxene
gneiss ⇒ hyroxenite → hyroxenite
- all in bands 1' - 3'
thick with well-defined
sharp - gradational margins (No samples
Between the thick concordant
hyroxene gneiss & thick
bands ⇒ 50' to yellow-brown
quartz grano, hyroxene biotite
w/ more than bands hyroxene
gneiss & more hyroxenite

Bar. L. & annavel I.
N.E. of Bar. Interbedded
lt. yellow-brown quartz
schist & fg blue-gy-green
garnet schist w. thin 6"
basal garnet hornfels. All
dike N.E., absence of
hornfels noted
Hornfels very thick ⇒ 20'
dk-green grain fm
Thin 4', 6" bands
quartz rich quartz grain
probably tuffs
Bar. + fol. str. 140°
∠ 50° — vertical S.W.
pitch 70° W. on N
Locally confortable to
underlying recumbent
fold, Many lin // strike

from few inches to
100 feet long - a
seam in cliff of Bay
Eastern end of bay. I
& Eastern end of I. between
bay & Bay are large masses
+100' of dissedant pyroxene
gneiss; with interbanded
& interfolded lt brown
quartz gneiss. When
pyroxene gneiss. Basis.
The intrusions are involved
in the latest, post-
foliation folding
recumbent style folding
(what develops the foliation
itself a separate process)
The intrusions are dom.
feldspar-pyroxene-garnet
rocks, med. gr. dk. greenish
grey & greenish black &
these are banded & FOLIATED
very foliated, into bands as
above & garnet-gneiss,
& pyroxenite & feldspathic

Long I. lt. yellow-brown
quartz grains sh. 40° d
20° — 40° SW. - complicated
by large scale (+100')
recumbent folding?

? Folded intrusives.

The intrusives are foliated +
folded that they cut, locally
sharply, the foliated quartz grains

22nd September, 1961

Up 0730 to 1100. Half
overcast but good visibility, cold
light E'ly wind v. annoying.
Steady but much Ledged & soft
snow flake all over. 1500 Junk
on Island Between Long & Long
Ice over Albright I. 1800.
Wind died, beautiful evening.
Seal - plenty, otter.

23rd September, 1961.

East end of Crooked Is.,
Green ice 1500, d. vertical
to 50° W., Kee & recumbent
folds on 2 directions, 45 ft. (plunge)
to strike, approx Long,
Lineation (plunge) in dip, again
Ice horizontal :-

Contact of fels abv 100'
has a core of white med-
gr. garnet-quartzite SAMPLE
130 11533
in envelope of interbedded 11534
garnet-pyroxene gneiss SAMPLE
+ quartz-feldspar-biotite 137 11536 (MARBUT)
gneiss. SAMPLE 138 11537
Rocks in quartzite
follow str. plge of
recumbent folding.
Bright Cu stain, red Fe
stain common in pyroxene

green 4 in quartzite in
mass of fold ... to nl.
Quartz - biotite - garnet SAMPLE 139
pegmatite pods not to be, 11538
+ biotite ... not common
in quartz, green + in
pegmatite rel. to Wisk
Orogeny. Also pegmatite, decomposes
biotite + hypersthene green
may be biotite
Bds hypersthene green
Wisk dick +10' a few
plag - 4" in quartz
green + int d'rodonite
Lit

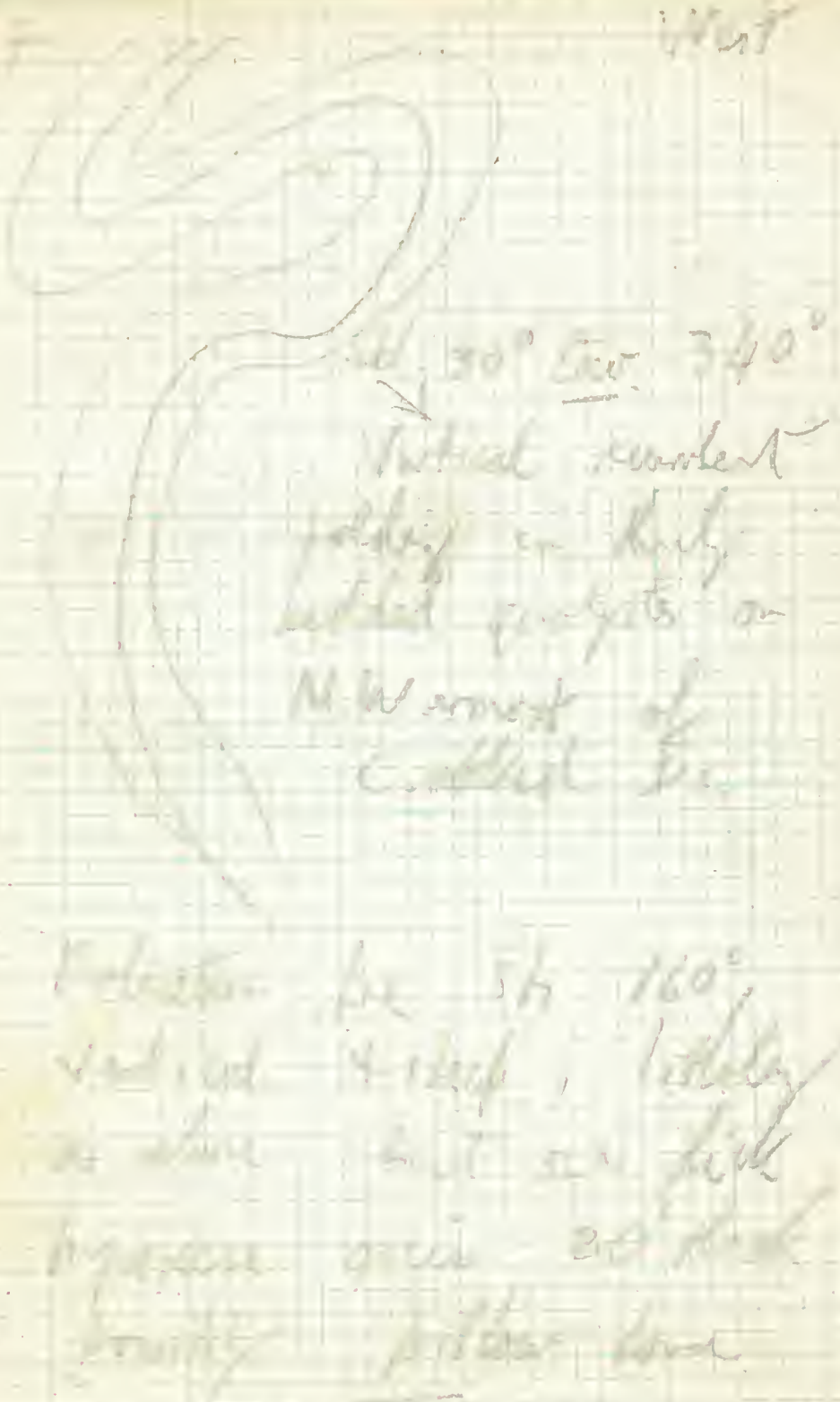
West end of the outermost
of Crooked Lakes has a poor
rocky beach w. many subrounded
+ a few rounded pebbles. Head
of bank a quartz-filled
gully 100 yds wide, with
a vague platform in boulders
about 15' above S.L. +
top of gully abt. 50' above S.L.

rounded pebbles all up to 6".
Quartz veins to 2" wide
(1 band but one 3").
Also some basic pegmatite
dikes to 18" thick, horizontal,
dips to 20° under dacite roof
West end of pegmatite.

Northwest end of middle I
of group, grades into 5°, vertical.
fine grained feldspar -
hornblende - garnet gneiss, some -
coarse dark, greenish - black
band of ~~gr~~ w. small felsic patches
& veins or stringers with sine
tongues. Also garnet -
quartz gneiss, black particle
(ls?) + garnet - biotite -
quartz pegmatite in concordant
bands. Large ex stains
common, thin, veined.
Quartz veins of common type.

Beach Back at West end (deep bay
to end) of Middle Island
Mostly sub-round boulders
2' at county wall, only
well defined platform to the S.
Mostly sandy, [illegible]
[illegible] end of Central Is.
Tidal flat shallow slope E-W
not level, generally lt. yellow-
brown sand & pebbles of quartz
grains & broken shell fragments
3 W' current [illegible] to
Shingle beach (6" - 2")
quartz, white to lt. purple
[illegible] some [illegible]
& fragments [illegible], mostly
[illegible] [illegible]
[illegible] lt. brown sandy silt
[illegible] to beach
SE 10' high steep wet to
10' E of W, [illegible]
[illegible] recumbent folds
[illegible] plunge 30° to 210°

33



for [illegible] followed 65'-18'
[illegible] limited by
[illegible] [illegible]

→ See Kodachrome, black & white

DIARY - 23rd September, 1961

Up 0830 to 1130, after
usual breakfast. Cold night -16°F
at 6 a.m., light E'ly wind & overcast.
Radio 'lizzy' & Blackfamily -4-
to cooked Ts, -more quantity
bottle brominert, opened reads.
fdes. Nelly leave at 1700, caught
fly & lured off. Glorious day -
cloudless, back to Aft craft &
camp at 1830. Smith remained
on ridge to retrieve Nelly.

24th September, 1961

About 3 [illegible] NE [illegible]
star shots recorded fields plane
[illegible] 340 and 20. Stake
of [illegible] is 0° when vertical

Mark Point sylvia abt 1½ miles
of coastline, N-S. Thick + thin
dentrites, + quartz-grains fine
sand + polycrase grains abt.
150° + 40° S.W., no more
[illegible] seen from 1m distance
but see above.

[illegible]

Up 0730 & away 10 pts, beautiful day
W. cold light E'ly wind, T -12°F
Low about T to Hansen Glacier stopped
at 1500, dogs away a bit sloppily
probably too much good sediment.
Pass on East Nole Point to
unnamed islands 2 m.s. &
find good camp site beside wind
sheer on ice, offshore water
slush in rift there but as usual
dogs instantly sensed it. Into
tent by 2000, beautiful calm
evening, dogs obviously very content.

DIARY 25th September, 1961.
Fog 0800 to mid. E'ly wind, light
drift, overcast. Wind & drift increased
steadily all day to stay with
heavy drift by evening. Stayed
in tent all day.

DIARY 26th September, 1961. (Tuesday?)
Wind eased in early morning, T rose to +10°F
to moderate snowfall all day, completely
whiteout. Wind rose again round mid day,
died to calm in evening. Out for
cold midnight — in down suit & slippers.

41

27th September, 1961.

55 m. Island abt 2m. S.S.E.(T) of Mule Point.

Str. 0°, d/p ±60° East, rocks heavily masked by fresh snow.

Dom. garnet-quartzite with bright Cu stain common, interbed. w. concordant quartz-garnet-biotite pegmatite w. coarse knots biotite garnet rock, abo biotite ± feldspar gneiss & feldspar-biotite-pyroxene gneiss, all minor comp. garnet quartzites which are 50%.

The 75m. Island 3m S.E (T) of Mule Point abo heavily masked by snow, visible is gneiss feldspar-garnet-biotite gneiss with quartz & with knots & concordant lenses pink feldspar pegmatite. All str. 130°/50°SW.

No accessible sample

but notable lack of massive or thick pyroxene rocks.

Kring Ts

Waterman, North point
greens str 120° / 30° SW Dominantly
yellow-brown quartz-rich
quartz-feldspar-? biotite gneiss
med gr., well foliated, xtls.
arranged in regular bands picked
out by biotite. This rock
contains bands 6" ⇒ 3' thick of
quartz-pyroxene gneiss, w.
fairly sharp boundaries but possibly
small scale gradation in outer
inch - perhaps tuffs - ?
or segregation? - medium
- grained, more massive than
quartz-gneiss, & internal
foliation usually poor
Coarse-grained equivalents
of the quartz-gneiss have a
shiny black color (feldspar)
I had previously in notebook
been mapped as concordant
pegmatites. The pyroxene gneiss is

Ts

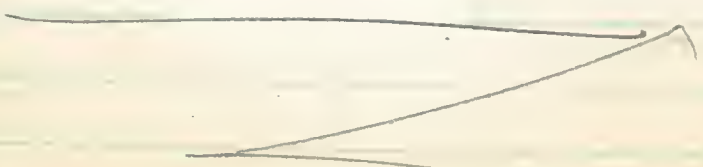
strictly concordant bc -
no garnet the ~~epidote~~.
Easternmost of Kring Is. at W.
end of North Shore a ?20' raised
beach, small.
Gneiss as Western island, str. 130°
d. 30° SW., mainly yellow-brown
quartzite or quartz-rich
quartz-feldspar-biotite gneiss,
med. gr. to ~~v~~ crs. gr. ~~bec~~ massive
to well-foliated depending on biotite
quartz-pyroxene or ?feldspar
pyroxene gneiss as above very
6" - 20' thickness but well defined
& continuous. Some thin lenses 2"-4"
discontinuous mafic material in
quartz ~~granite~~ gneiss, ? biotite, ? pyroxene,
bc gradational bc bands, presumably
pyroclastic origin. SAMPLE 140
NO GARNET, ? biotite rare 11539
in itself. ~~Less~~ No biotite gneisses. 11540
~~Th~~ ~~less~~ serial bc.
Va/9

DIARY – 27th September, 1961

Rose 0830 to blue sky, fine day, T 0°, light E'ly wind, bright light, thick soft powder snow surface. Crevasse about, difficult d/c thick snow cover. Dep 1300 to neighbouring island to east, then to King Is. Walking traverse with party killed & butchered seal. Hove again 1830, after warm windless afternoon sunny. Cloud in from west east, & south, E'ly wind beyond increased to mod. W. light drift. Arrived Bodka composite 2100, pitched camp in dark, into tent 2400, sank at 0200, wind increased to stiff with heavy drift in morning.

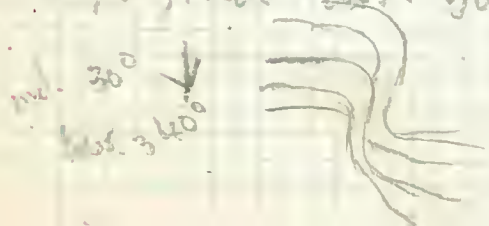
DIARY – 28th September 1961.

0900 rose, stiff wind, heavy drift, out to lights. back guy, added snow to sealed back wall then all day in tent, very heavy drift later, Vis. ≯ 10 yds.



29th September, 1960.

East coast of Broka, close North of camp steep dips, str. about 160°, dips near vertical (see Outward journey). North of this dips ease & lose regular trend, to str. 145°/20°NW, all thin + thick pyroxene gneiss interbanded quartz. mol yellow-brown m.g. & co.gr. garnet gneiss, garnets scarce. Gentle d/p as above (i.e. towards NW.) prob. sub-|| plunge of recumbent folding. North east part Broka possibly a separate island. At northern end east side, plastic str. well-marked (thin) pyroxene gneiss in quartz gneiss plunge found 340°, incl. alt. 30°, || shallow d/p a fast. slide, str. 160°,



Northeast point of Boka I. is joined to main island by narrow sandy ice-covered isthmus, about 200 yards.

Ps. A is on West side of the Great Bay in North Boka

Here quartz-rich lt. yellow brown m.g. well-foliated granite gneiss w. rel. thin 3" - 3' to few 10' beds m.g. figured gneiss concordant & semiconcordant, str. 170° d. 70°W to 50° W. No garnets no Fe stain, no Ca stain, no diopside.

North Point of West side of the Bay & continuing along North West coast sheet structure str. 170° d. 50°-70° W, thick & distinct pyroxene gneiss beds in granite gneiss - "scaly gneiss" again, no technical diopside or bright Fe stain as in Crystal. At this point a very coarse feldspar-quartz light pegmatite, about 20' thick, red & dark grey to

+ black semi lethal feldspar
+ some black metal bastit
w. few completely ankeral
grains + large blebs + stems,
irregular of white sugary
vein quartz. Also with pyrrhotite
+ epidote if in volume i
red quartz-feldspar. biotite-
garnet gneiss, med. gr.
well foliated but clearly
a concordant intrusion.
No visible garnet in country
rock SAMPLES 141 11541 11543

Str. assoc all along N.W. Bioka
coast + skerries.

2 skerries, northernmost islets off
West Coast of Bioka, thin
bands pegmatite gneiss in yellow
granite gneiss str. 0°, / 80° W.

North end of long island close

west of Boka, str. 10°/70° W
- Rel. thin & impure, pyroxene gneiss 2" - 2' in lt yellow brown granite gneiss w. garnet very rare assoc. w. pegmatite sheets lenses in granite gneiss & in pyroxene gneiss
SAMPLE 142
11542 Va/8
The thin bands → 2' red granite gneiss, pink feldspar-rich granite gneiss opp. to quartz-rich feldspar yellow granite gneiss.
- The long island is 2 islands the N'm 100 m. island smaller slightly circular the S'm 80 m island longer, elongated to North.

The S'm 80 m. island, banded gneiss str. 160°/70° W) - dip constant 50° - 70° over the "long island" not folding apparent on large scale but possibly

obscured by soft sand cone.

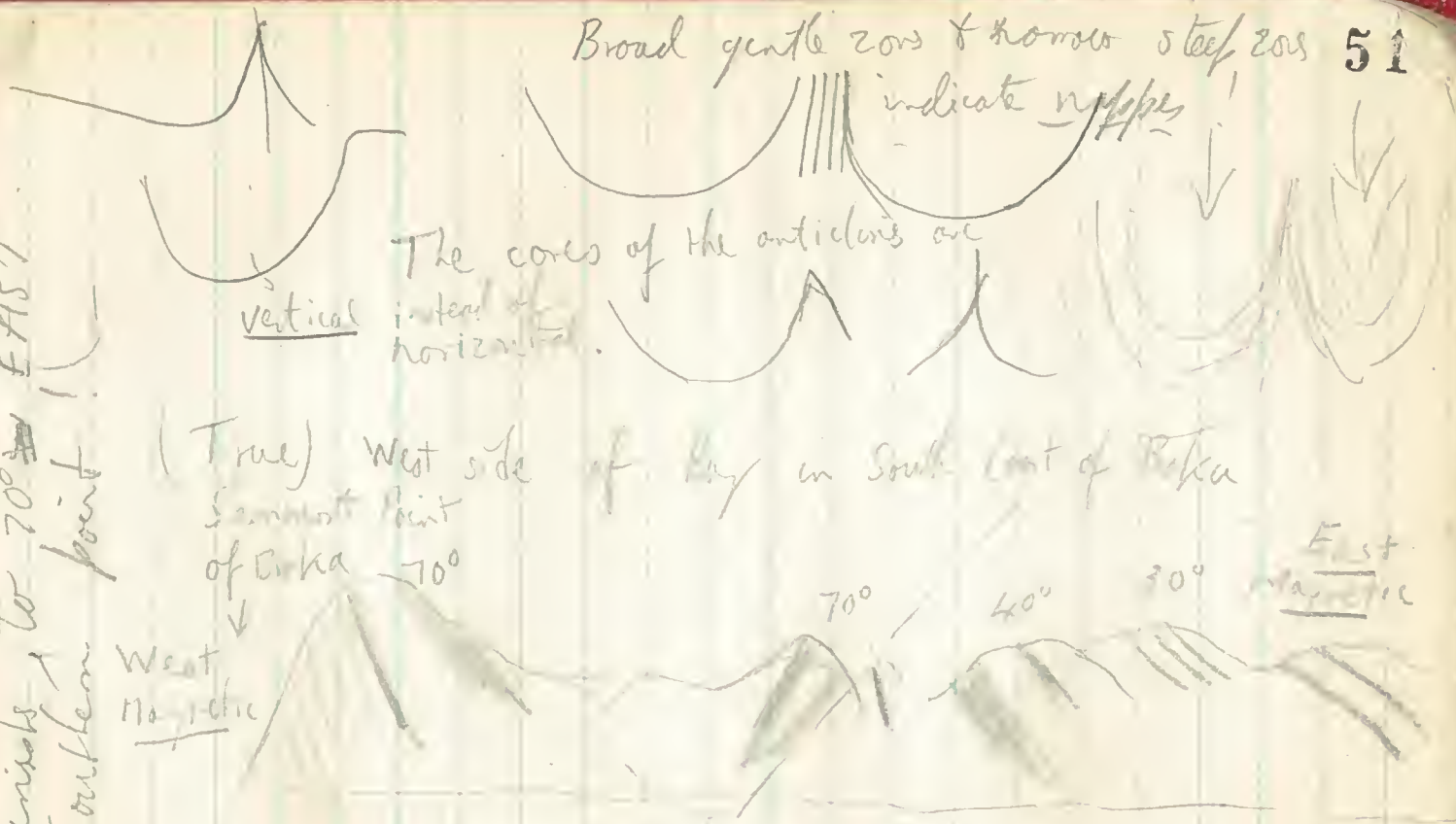
The 80 m. island is the "pink rock" beach flea of the outwork, among (? samples)

S.W. coast Baka & around 1½ mile east of S.W. coast Sh. still 170° dip 70°, & to 20° W. & ½ vertical.

Part of Baka's S.W. coast alt 1m. W. of S'most point, is separate island, elongate N-S N. point is pk. alt 80 m. high, looks as if ice cliff on Baka, 100 yd. channel between.

At S'most point of Baka "discordant" feldspar-pyroxene rocks sharply cut foliation of granite gneiss but contact of two is fine 2 mm. scale mylonite, the pyroxene rocks occur only in little stylo dislocations & have been [illegible] fractured

SAMPLE 143
11544
11545
Ve/T



This structure is similar to Hobbs Is. where a possible extension of a basin syncline exists to or plots.

expansion of the synclinal axis.
Str. 160° constant along S.W. cont.
dip diminishes to 70° E of S
cut Southern point.

- South coast due East of Bay; gneiss sh. 160°/30° E

Bay forming S.E corner Boka has steep dip round NW. shore, Sh. abt. 150°/30°-40° E

Skerry in middle of bay has folds sub-horizontal. All to be sharp, thick band [illegible] fine-grained [illegible] quartz-[illegible] coarse gneiss.

Hills behind camp are steep, 200', sh. abt., dip probably steeper [illegible] N. wards to camp.

Low hills at head of glacier running into N.W. corner of bay, foliation is sub-horizontal & has low W/N dip, 200.

Foliation & banding are sub-horizontal

on Cottier Island guarding this Bay.

DIARY, Friday 29th September, 1961.

Away 1100, Duke Smith & Blonds up east coast Broka & cut across narrow neck of ice to great northern bay. Across & round N.W. point, vein quartz in pegmatite & down inside western blonds, home along South Coast. 1830 Worm in sun all day. Tabt +10°F, light cold fly unpleasant when contrary. Snowdrifts appreciably better after big wind yesterday, but still local heavy masking by soft snow & still poor surface.

30th September 1961.

Dip at Broka Camp is 70° W.S.W. (50°-70°) on E coastline close to North is near vertical. In Cottier Island is sub-horizontal & in hills at N. side above bay (yesterday) is gentle W.S.W. 20°

S Foot Camp Broka N

South West corner Hunter, granite gneiss, banding quite as above str. 0°/40° West

Also sheets of semi-discordant

Igneous rock dip broadly 30°-50° West cut foliation at low angle, gen. about 10°.

Entire South Coast of Harstein str. 160°/ 30°-50° West

Thick (8"-6") well-defined black ? inclusion-pyroxene gneiss in well foliated ft yellow-brown quartz gneiss. Minor discordant & concordant veins white & pink feldspar-with pegmatite, rare

The pyroxene gneiss is generally concordant, in detail discordant perhaps by tectonic action.

the disconformity marked by slickensides & thrusting a.w. plastic or recumbent folding, though recumbent folding is not so common but is so clearly demonstrated on small scale as in Oyster Bay.

In the broad Bay formed by the SE. corner of Hamstain, the grits in cliffs on N. side bay str. about 160° & 30°-40° EAST Bay may be on eroded anticline, or ? Strike zone - no reliable axis ? horizontal or vertical.

Law I. 8034V/310.

Pt. I. Str. 30°, vertical!, Eat end outcrop Str. 60°/vertical

Here thick physical grits (20') are in thinner bedded, well-jointed, segregated into lenses & beds of grit etc. Qz feldsp & quartz-feldspar material & other hard pyroxene rock, e.g. Ic as gr. The block & pebble grits have evidently been invaded by pegmatitic & granitic material & → p. 58

Pts 2, 2a strike swings in bay to 80°M / 80°N at these points, rocks as above.
- continues page 58.

In the pegmatites, probably which stud the migmatites, high in random veins bands & lenses, magnetite is a local accessory → 10% & green Cu staining is common in pegmatite + red garnet-quartzite

DINKY 30th September.

Rise 0736, away 1100, along South coast of Horstein then straight to western end Law Is. Mod. E'ly wind felt warm there in face, T abt +15°F, but surfaces better, more consolidated, wind swept. Geology in migmatite then to camp site at 1630.

Late geology on shale of ca. 1800 – 1436, then lesively dense. Blonds going well but Pete's still badly chopped about after being set on by Blonds on 27th

from p. 55

[illegible] from the original black thinly laminated rock grades to light olive green & [illegible] lt. brown-yellow-green ultramylonite & almost pure. These migmatites range from with addition of quartz, garnet, & biotite from black feldspar-pyroxene gneiss to yellow green-yellow pyroxene-relics in garnet-biotite granite!! All concordant, gneissic, & well-foliated. Separating the pyroxene gneiss bands are dark bands varicolored granulite & quartz gneiss, grey, purple, red, & rust. brown, w. varying amounts biotite & garnet. These may be injection gneiss, all concordant, migmatitic

11546 Va/6

11547 Va/7

see p. 56

Pt. 3 Camp place. Foliation vertical str. 50°, recumbent folding presumed in pyroxene gneiss, amphib. 3', pitch trend 230°, incl 30° – 50°. Both Fault quartzite, fine-grained granite, quartz-gneiss, + feldspar-biotite-quartz pegmatite alternate w. reddish-yellowish dark green pyroxene gneiss in migmatitic relationship. Garnet + biotite are common dark mineral in the granite rocks. I also a reddish dark grey gneiss w. porphyroblasts or augen of ~~pegmatite~~ (orthoclase). SAMPLE 146 11548 Va/c
also w. biotite + feldspar, virtually a foliated porphyritic granite. Folidation strong in rock. The pyroxene gneiss which Va/b
are shown stripped in f.g. red granite rock, granite 11549
~~migmatite~~, pyroxene gneiss SAMPLE 147
Quartzite at Hill 4 are likewise flanked by coarse red feldspathic pegmatite, Quartzite

69

may be original or may be
injection rock. ? 1st October 08.

Small strings of veins East
of Pt. 3. continue vertical
pyroxene granulite to area
to Pt #5 Where vertical
pyroxene granulite str 30°, w.
(3') thin + few bands white
quartz, but several w. thin
bands + lens quartz-mica
hornfels, white to grey
coarse-grained + hybridized
the pyroxene granulite.

Pt 4 str 30° [illegible]
+ pyroxene granulite [illegible]
+ thick [illegible]

Next island east of Pt 5 str 25°/70° SE.
Thick hyper green 20', interb. thin
white quartzite - 3'

60132 V from Pt. 108 outcrop
of [illegible] to [illegible] gneiss
dip [illegible] thick [illegible] gneiss to Hedland
of Hedland Rock & the yellow
& pink gneiss Pt. 109
Str. 130°/30°E
Pt 110 A gentle anticline on
top of bluff, plunge (can
only tell on face) 10° toward 50°
(Str. Str. 140°) limbs dip 20°
SE + NW
Hedland south of here is
a light green & dark grey &
black feldspar, hypersthene gneiss,
generally thick, in fine bands
the black with quartz veins
& pink pegmatite & a few red-pink.
Light yellow-brown granite gneiss
in a pocket, light-
green and yellow brown
& pink light green gneiss
in thick bands.
N end of Hedland is rib here,
South end Str. 15°/30° E.
Trap dyke cuts it north.
Fine granite - very fine grained,

c/p 5/6.

DIARY – 1st October, 1961.

Up 0730 & away 1100 in mod. E'ly, through low Is. Wind rose, increased pack to stony & drift increased light to moderate. Rubbly round outside Low Is & crossed to Blackrock Head, days going well, outside numerous icebergs clogging passages in Low Is. Blackrock Head & Low Is. Generally pyrox. greeo No comp site Blackrock Head, many bad slushy patches on ice, high temps. many days now-to-day +48°F. 1430 left Blackrock Head for Eddys & crossed Skelvoson Bay in steadily increasing wind & drift Passed Transverse I. 1730

4 on through passage, waiting
for tide very slippery but ice.
Last Alt. 1m from 5 days wind
steadily increased to mod gale
(force 7) & drift to Leon,
stranded up slope to clear
crevasse in very poor visibility,
& erected tents in very
heavy drift & force 7 wind (→ 40 m/ph
Tents up, 2 men each windward pole,
1 man each windward guy
sheet against wind, ~~then~~ pile
with windward flap always
weighted, then pole men set
lee pole, ~~then~~ tent & bl on
windward, guy men set windward
& other guys - scrambling &
carry. Into tent 2130
& bed 2400; a notable day.

DIARY 2nd October.

Stage to gale wind battering tent,
very heavy drift. Rose 1100,
breakf. Snow abate out 1600
to feed dogs, dig tents. Read
Rumpelstiltskin all day, bed at 2300

with wind easing.

3rd October, 1961 - DIARY.

Rose 0830, no wind, heavy snow. Out 1000 for laundry light snow, warm, weather clearing. Out again 1200 & clean sledge boxes, air sledging kit. Sun out till afternoon, Tabt. +25°F snow melting on rocks, tent, boots. Sat around talking in sun, no parkas, no gloves, no hats, very pleasant. Smith & Pardoe scaly, Pardoe through soft snow into seal hole, wet through to waist, pulled out by Smith - obviously damp walk alone in soft snow.

Into tent 1730, v. pleasant calm sunny evening - seal for dinner.

14th October, 1961.

Up 0745, away 1100 after spilling 4 cups coffee in tent - major catastrophe. Accompanied Parke to Rookery, chicks now in large parties, numbers parents much smaller. Off to Ivs Tongue channel where entered slushy patch & dogs, men, sledge all sank through soft wet snow into sea, men up to waist. Keyes on to firm ice & rapidly led dogs on hauling sledge & Smith & Trail to safety. Retreated very cautiously & found rotten ice & water common throughout eastern approach to Rookery. Reconnoitred route along north shore (Fiddler Shore) across landing & out to sea. Slush everywhere under soft fresh snow. T today about +4°F but 28°F in sun. About two miles out to sea going appreciably improved so returned camp 1700, collected seal killed yesterday, loaded sledge for to morrow. To-day's intention was running survey Scoresby Bay but this abandoned a/c ice conditions.

69

5th October, 1961. 9111R/329

Pt. III Small island at N.W point. I slay. Well-banded, finely-banded & well-foliated light yellow-green gneiss w. a few thin (3"-3') bands feldspar-pyroxene gneiss & pyroxenite. The yellow-green gneiss is probably a feldspar-quartz-pyroxene rock w. rel little quartz & only 5-10% pyroxene, tho' ~~comp~~. dark min. uncertain Str. 300/70° W. I slay NE end str. 10°/60° W.

SAMPLE 148 11550 V/22

Pt II Also pink-red lenses + thin concordant seams feldspar rich pegmatite soaking yellow-green gneiss, but not abundant.

Pt. III 2 raised beaches here

possibly 20' & 50' but seen at 1 mile distance only. - Islay.

DIARY - 5th October, 1961.

Up 0730 & away 1100, slow travel in deep soft snow & ice. Sledges laden dog food & rock specimens from depot. 1200 Packed team broke after - bullying & came up to Smith's team, fight only half-hearted as all dogs very hot, panting. Bright sunshine, T. abt +15°F in shade. Followed yesterday's tracks through slushy patches & surface improved abt to ankle but slush & open water - seal-holes - again between Islay & Cowley slowed progress at 1600. Deep soft snow & slushy puddles followed all way to Wm. Scoresby Bay, mostly lead & arrived camp-site Foreland I. at 2015, self very tired from soft snow, thirsty, hot. In tent 2200 & sack' at 0030 Heavy snow in night.

67

6th October, 1961

Structural observations in Wm. Scoby Itch.

Pt 113 Photo 8006V/310

Str. 160°/40°W.

Pt. 114 Str. 160°/25° W.

Pt. 115 (Forecast Island

Str. 130°/40° SW.

Pt. 116 Apparent dip.

Incl. 20° towards S.W.

8008V/310

Pt. 117

Str 150°/40° (S.E.) at W.(T) end

Str. 150°/20° S.E. at E(T) end.

8120V/329

Pt. 118 (? 20° towards N.W. (T)?!

Pt. 119 ? str. 80°/30°-40° N.

Pt. 120 True East end incl 20° towards N(T.)

also sub-horizontal.

little radical change in iceberg distribution vicinity Forecast I since 1954. ~~but~~ group bergs close E. Pt 117 ~~any~~ some of these now close to W. end Forecast I. moved abt. ½ m. to 1 m. W. into Sea close East Forecast I. choked small bergs 1m. out to S. and Pt. 116 island.

DIARY - 6th October, 1961. FRIDAY.

Rose 0800 after heavy snow, light wind all night. 0900 Howson forecast blizzard this afternoon, so out 1030, tie down all round sled dogs. Snow stopped 1300, sun out, had scrambled eggs & out 1500. ~~Attempted~~ started plotting on photos w. binoculars from island summit but heavy snow masking rocks. In again 1730 to afternoon tea. Light NW wind, intermittent light snow. T +17°F, warm in tent w. down suit.

Egypt

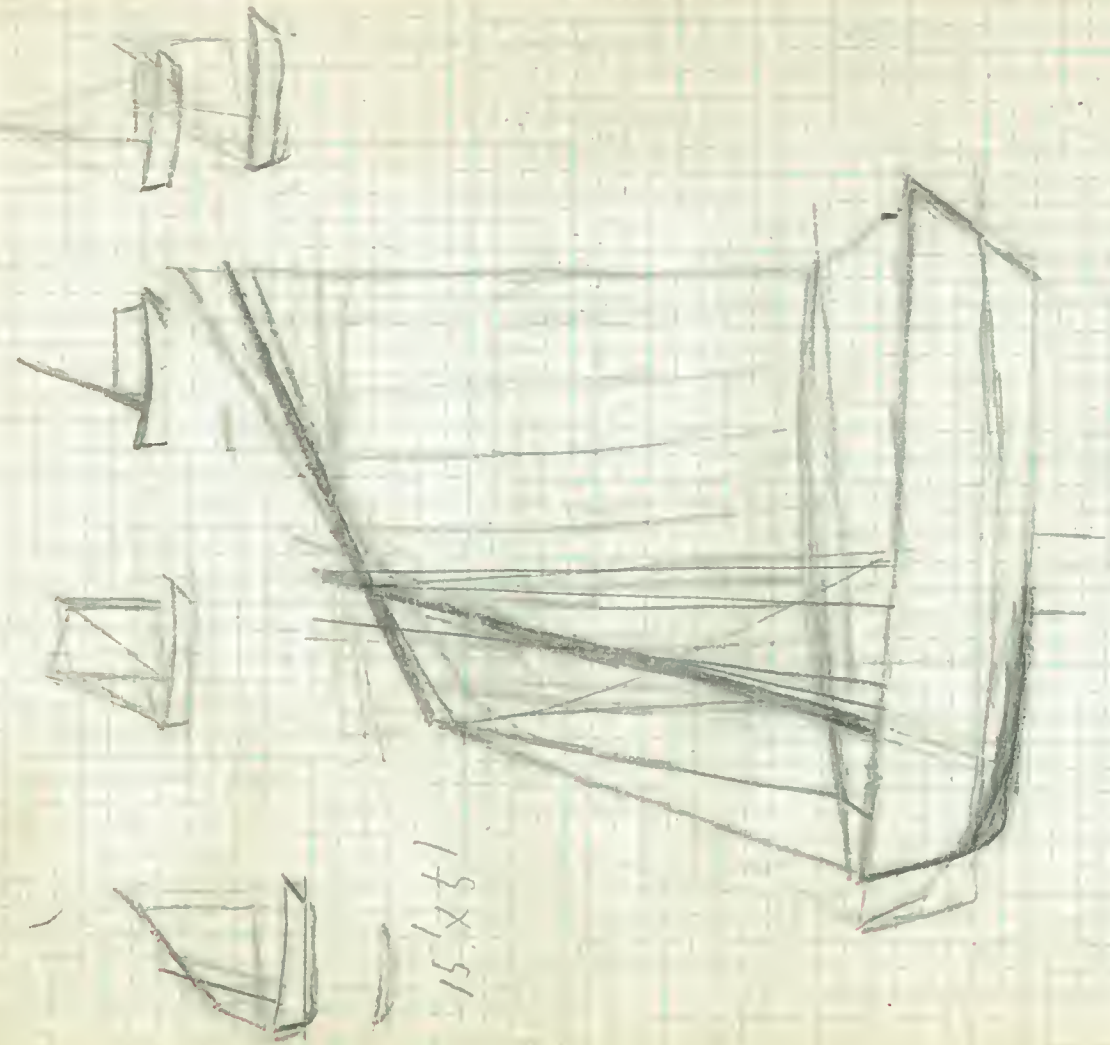
Small boat. Mast sta. 2 small boys / 30 days.

Nile Felucca

Small 4 mast sta. 3 Nile boys / 40 days

Chocolate — 1 oz / man / day
Sugar — Portion
Pemmican — ¼ lb / man / day
HFB — ½ " " "
* Biscuit — 10 biscuits / man / day
Butter — ½ lb. / man / week
* Jam — 1 tin / man / week
Eggs — 1 each / man / week
Vegetables — 2/3 tin / man / month
Salt — 1 lb → party
Tea — ½ lb man / month ?
* Coffee — 1 tin / man / month
Sugar — ½ lb man / day
Oatmeal — 1 cup / man / day
* Chocolate — 1 bar / man / day
Lollies — 2 lb / man / week

Meat for 3 men
Oatmeal — 21 cups — 7 days
Sugar — 5 lb — 7 days
Bacon — 1 lb — 5 days
Jam — 1 lb — 3 days


15 1/2 x 5 1

23/1/61 – Food Consumption

33 days from Lawson

25 days from Taylor

1 gallon Kerosene lasted 9 days.

Coffee

Smith + Trail used 2 tins in 22 days

Coffee 2x daily + 1 lunch time coffee for 22 days

~~Tea~~ Keyser Hodge used 1 tin for 25 days, 1x daily

Oatmeal

Smith + Trail used 2 bags in 18 days

Biscuits

Smith + Trail used 4 lbs/day for 30 days

~~Hen~~ used 5-6 lbs/day

Pemmican

Smith + T. ate ½ block/day

+ ~~1~~ 1 block HF6/day

~~Sugar~~

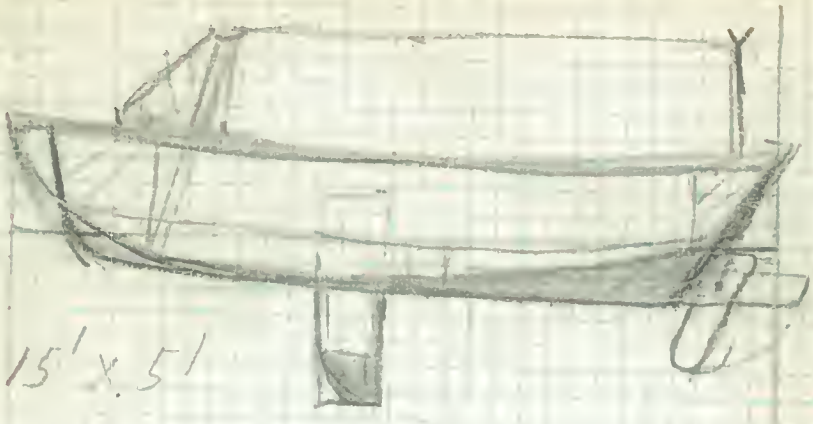
Smith + Trail ate 2 bags sugar in 21 days

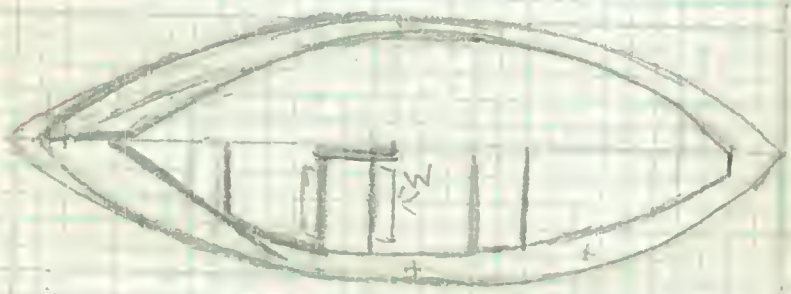
Jam

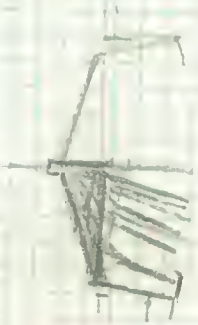
Smith + Trail ate 7 lbs jam in ~~34~~ 29 days

Butter

Smith + Trail / 3½ lb. in 30 days.


15' x 5'


12"



1944/58	Pyrowacic inipunctata, W. Law fc. f.
1945/58	Quantz & Wiehl, ...

146/59 Quartz grano (granite) W. Low Is.

147/59 Pegmatite grain, W. Low Is.

148/59 Yellow-grey grain, N.E. Islay.

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0064